BROTHERS *v.* UNITED STATES.

APPEAL FROM THE COURT OF CLAIMS.

No. 309. Argued March 28, 1919.—Decided May 19, 1919.

An unliquidated claim against the United States, under the Act of June 25, 1910, c. 423, 36 Stat. 851, for the alleged infringement of a patent is not assignable with the patent. Rev. Stats., § 3477. P. 89.

The essential feature of patent No. 551,614, granted to Sarah E. Brothers et al. for "improvements in cable cranes with gravity anchors," is a non-yielding support or anchor at one end of the cable, and a yielding, tilting, or rocking support at the opposite end, consisting of outwardly inclined shears or some equivalent structure held movably at the base, and a counterweight on the outer side. *Id.*

This patent was not infringed by the use of cableways supported by two towers both of which were intended and constructed to be rigid, but both of which, upon the tightening of the cables, done for the purpose of enabling the loads to clear the work as its height increased, acquired a tendency to yield with the yielding of the railroad bed beneath them, under the increased stress. P. 93.

Findings of the Court of Claims are to be treated like the verdict of a jury, and this court is not at liberty to refer to the evidence, any more than to the opinion, for the purpose of eking out, controlling or modifying their scope. *Id.*

52 Ct. Clms. 462, affirmed.

THE case is stated in the opinion.

Mr. William F. Brothers pro se.

Mr. Assistant Attorney General Frierson, for the United States, submitted.

MR. JUSTICE PITNEY delivered the opinion of the court.

Appellant brought this action in the Court of Claims under the Act of June 25, 1910, c. 423, 36 Stat. 851, to recover compensation for the unlicensed use by the United States in the Panama Canal work of his patented invention for "Improvements in cable cranes with gravity anchors." That court made findings of fact upon which it concluded as matter of law that there was no infringement of claimant's patent, and thereupon dismissed his petition. 52 Ct. Clms. 462.

From the findings it appears that claimant filed application for his patent July 18, 1895, and, upon such application, letters patent No. 551,614 were granted and issued, under date December 17, 1895, to his assignees Sarah E. Brothers and Maria A. Brown, to whom he had made assignment pending the application. Subsequently the letters patent were assigned to claimant, under date October 2, 1912, two and one-half months prior to their expiration by limitation on December 17, 1912. His claim to compensation is necessarily limited to this brief period, since there could be no assignment to him of any unliquidated claim against the Government arising prior to the time he became the owner of the patent. Rev. Stats., § 3477.

No question is made but that plaintiff's invention was broadly new, a pioneer in its line, and the patent entitled to a broad construction and the claims to a liberal application of the doctrine of equivalents. (See *Brothers* v. *Lidgerwood Mfg. Co.*, 223 Fed. Rep. 359.) It relates to the method of erecting and operating a suspension

cable adapted to carrying a traveling crane or the like. Roughly speaking, the prior art consisted in supporting such cables upon rigid and unyielding towers at each end, so as to prevent an undue sagging of the cable under the strain of its load. Claimant's invention consisted in employing a rigid support or abutment at one end of the cable and what is called a "gravity anchor" at the opposite end, consisting of outwardly inclined shears with the cable attached thereto and a weight hung permanently from the shears on the opposite side, which weight, together with the weight of the shears, puts a tension upon the cable varying according to the weight of the structure and counterweight, combined with the degree of inclination of the structure; the operation of the tension device being automatically to take up the slack of the suspended cable when the load approaches the supports, with the result of permitting the load to be moved closer to the supports, with a given exertion of power, than before. There are other advantages not necessary to be specified. The essential feature of the patent is a non-yielding support or anchor at one end of the cable, and a yielding, tilting, or rocking support at the opposite end, consisting of outwardly inclined shears or some equivalent structure held movably at the base, and a counterweight on the outer side. It is to be observed that rigidity of the head tower is a *sine qua non*, necessary to produce tension of the cable; yielding supports at both ends would be a contradiction of terms, since with such an arrangement there would be no support, and the entire structure would collapse under its own weight. The importance of this will appear.

In the construction of the Panama Canal the Government installed in the year 1909, and maintained and used continuously thereafter until the expiration of the Brothers patent, one single cableway and six duplex or double cableways which are complained of in this case

as infringements. As to the mode of construction, maintenance, and operation of these cableways, the findings of the Court of Claims are as follows:

"The single and the duplex cableways were similar in general design and construction except that the towers of the former supported a single cable, while those of the latter supported two cables, parallel to each other, at a distance of 18 feet apart, and each operated independently of the other, the length of the towers longitudinally of the canal cut being of proportionate dimension for the accommodation of the two cables. The towers were of structural steel construction; and taking the duplex cableways for illustration, each tower in vertical cross section from front to rear was in the shape of a right-angle triangle, with a base of approximately 50 feet, a perpendicular or vertical height of about 85 feet, and a hypothenuse of about 98 feet, with a length of about 38 feet longitudinally of the canal. The two towers of the cableway stood facing each other, on opposite banks of the canal cut, with their hypothenuse faces toward the cut. The cable span across the cut between the tops of the towers was approximately 800 feet. The cables used were 2¼-inch steel-wire cables having a rated breaking stress of 200 tons. The cables were supported by headblocks or saddles at the tops of the towers, and their ends were carried down and firmly anchored to the counterweighted bases of the towers.

"Rigidity of the towers was desired; and in order to secure this and hold the towers rigid against any tendency to tip, tilt, or yield under the stress of the suspended cables and their loads, the platform base at the rear side of each tower—that is, the side farthest from the canal cut—was counterweighted by a block of cement concrete of over 150 tons weight, cast about the structural steel members of the base of the tower and extending along practically the entire length of the base. The entire

weight of each tower, including the tower proper, the trucks upon which it was mounted, and the concrete counterweight, was upward of 500 tons.

"To facilitate the shifting or moving of the cableways along the canal cut as the work progressed each tower was mounted upon sets of trucks, similar to the trucks of railway cars, on the front and rear sides of the base of the tower, and the whole structure was mounted upon two standard-gauge railway tracks located on the bank of the canal cut at the proper distance from each other and from the similar tower tracks on the opposite bank of the cut.

"The cableways were operated by electrical power from the machinery stations in the head tower of each cableway.

"Subsequent to the construction and installation of said cableways they were maintained and operated without change in structural form or method of operation other than that as the height of the walls and other work of the canal increased, beginning about August, 1910, it became necessary, in order to admit of the loads being carried to pass clear of the works and men engaged thereon as the height of the work increased, to take up the slack or decrease the deflection of the cable. The cables were accordingly drawn up for said purpose. This tightening up of the cables or reduction of their deflection increased the effect of the load and weight of the cables upon the towers as regards their tendency to yield or tilt.

"It was the intent and purpose of the engineer officers of the Canal Commission, by and under whom said cableways were designed, constructed, and operated, that the towers thereof should be rigid and nonyielding to the full extent that rigidity in cable towers was possible; and there was no tilting or yielding of said towers other than such as resulted from a yielding of the roadbed of the tracks supporting them, portions of which roadbed con-

sisted of 'fills' of excavated materials upon swampy ground. There is no satisfactory evidence that the towers either yielded or tilted at any time during the period of claimant's ownership of said letters patent."

Upon the argument here, appellant quoted somewhat amply from the evidence taken before the Court of Claims. For the purposes of our review the findings of that court are to be treated like the verdict of a jury, and we are not at liberty to refer to the evidence, any more than to the opinion, for the purpose of eking out, controlling, or modifying their scope. *United States* v. *Smith*, 94 U. S. 214, 218; *Stone* v. *United States*, 164 U. S. 380, 382; *District of Columbia* v. *Barnes*, 197 U. S. 146, 150; *Crocker* v. *United States*, 240 U. S. 74, 78, and cases cited.

We concur in the opinion of the Court of Claims that no infringement of claimant's patent is shown. In the Act of June 25, 1910, under which this suit is brought and under which alone it could be brought, it is expressly provided that there shall be no such suit "based on the use by the United States of any article heretofore owned, leased, used by, or in the possession of the United States." In view of this and of the fact that the cableways complained of were theretofore in the possession of and used by the United States, claimant insists that after the passage of the act the Government materially altered the cableways in such a manner as to make them infringe his patent. The contention is that the cables were tightened up in order to decrease their deflection, and that this tightening, in view of the loads carried by the cables, caused the supporting towers to yield or tilt, and thus to become in essence movable towers like the gravity anchors covered by the claimant's patent. But, as pointed out by the Court of Claims, it is beyond question that, as constructed and used generally, and as intended to be used, the Government cableways did not infringe claimant's device. The subsequent tightening of the cables was done

in the orderly conduct of the work for the purpose of carrying the loads over and free from the work that was being constructed. So far as this caused a yielding of the tower under the stress of the load, it was an incidental result, affecting or tending to affect the towers on both sides, and not upon one side to the exclusion of the other. It did not amount to a mechanical equivalent of the claimant's structure; there is no semblance of an outward inclination of a yielding tower or yielding support, but rather a tendency on the part of rigid towers to break down or collapse inwardly under an undue stress. And, as we have shown, the rigidity of one support is as essential to claimant's structure as is the movability of the other.

Inasmuch as the findings fully support the judgment of the court below, its judgment must be and it is

Affirmed.